



Fig. 1

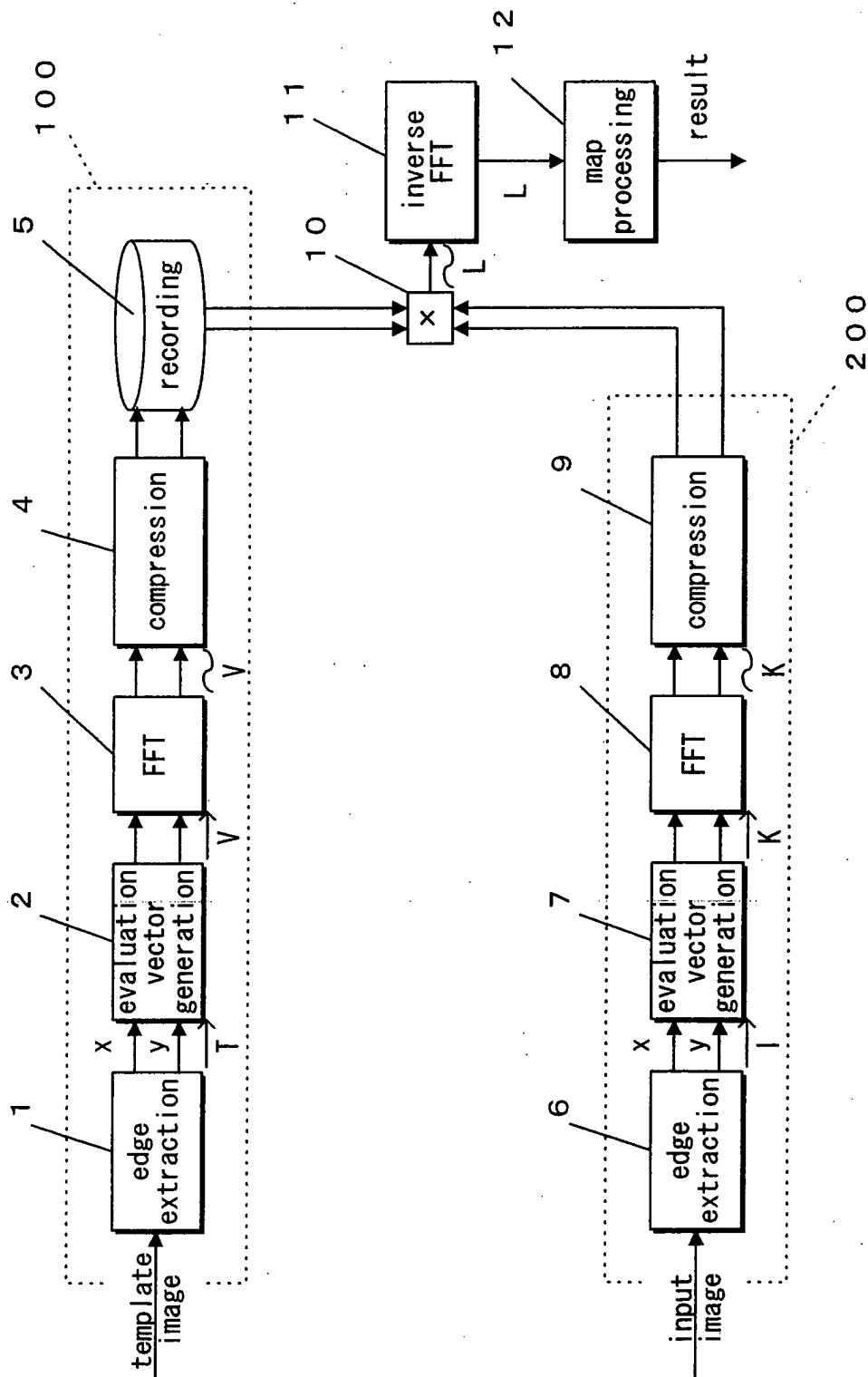
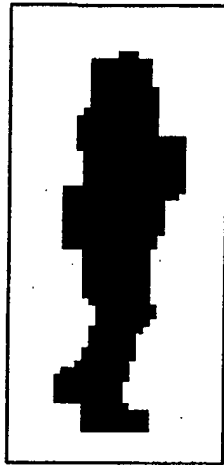


Fig. 2(a)



template image

Fig. 2(b)



X component

Fig. 2(c)



Y component

Fig. 3

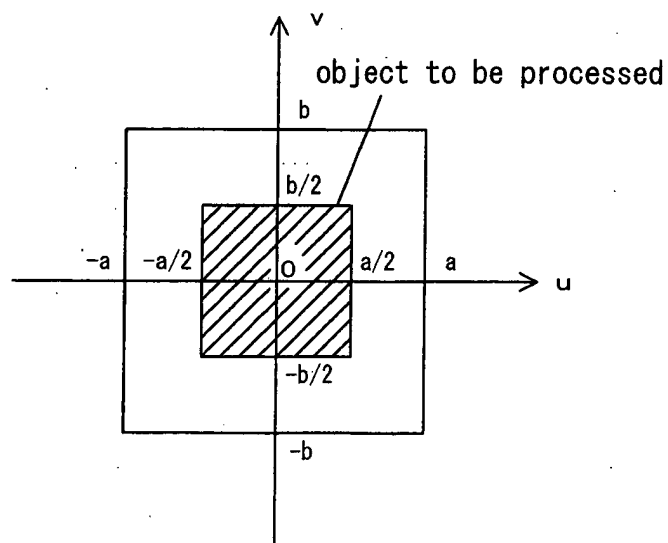
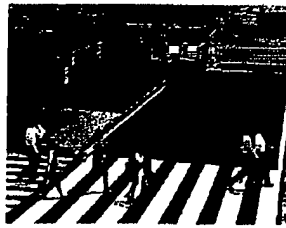
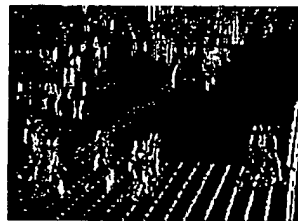


Fig. 4(a)



input image

Fig. 4(b)



X component

Fig. 4(c)



Y component

Fig. 5(a)

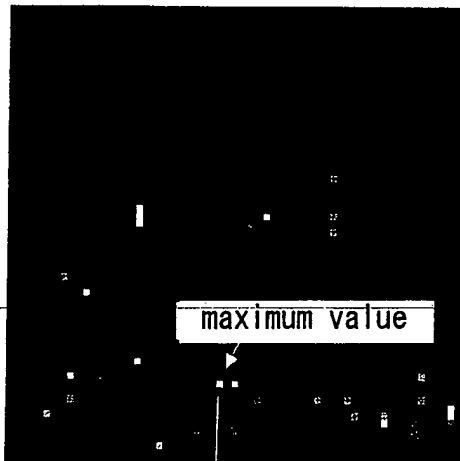


Fig. 5(b)



Fig. 6

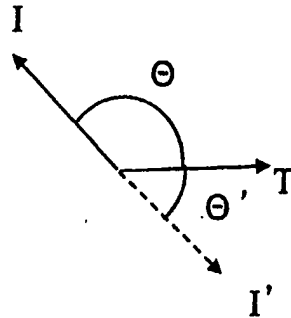


Fig. 7(a)

Fig. 7(b)

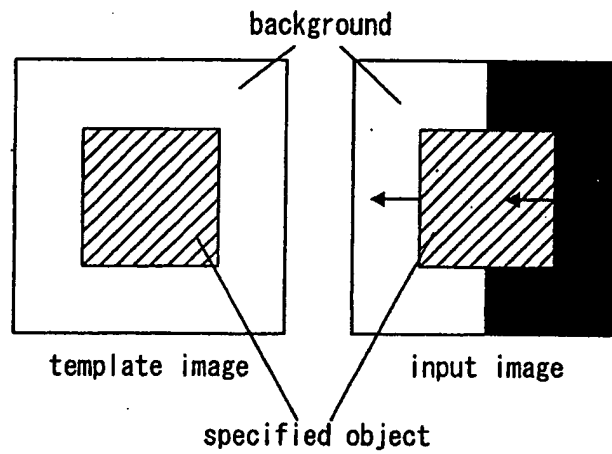


Fig. 8(a)

Fig. 8(b)

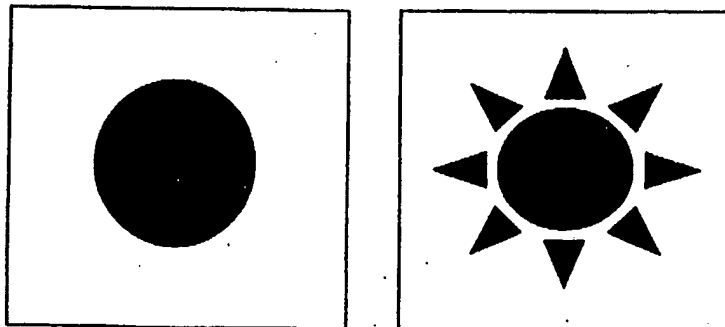


Fig. 9

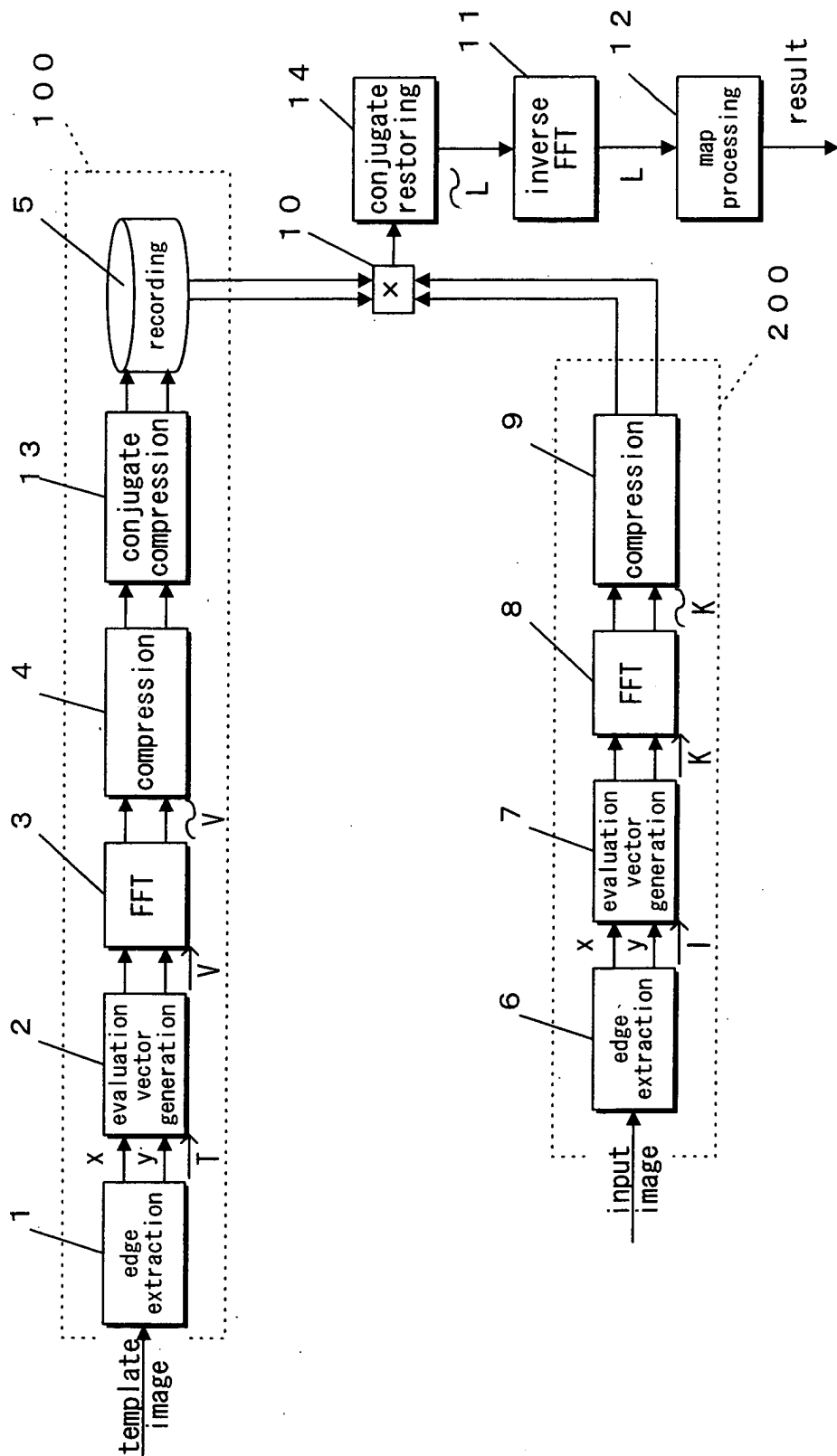


Fig. 10(a)

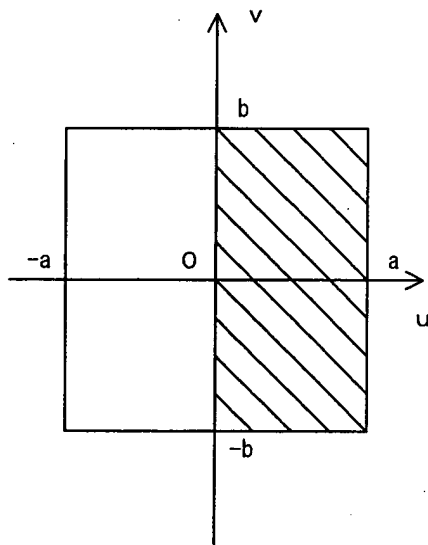


Fig. 10(b)

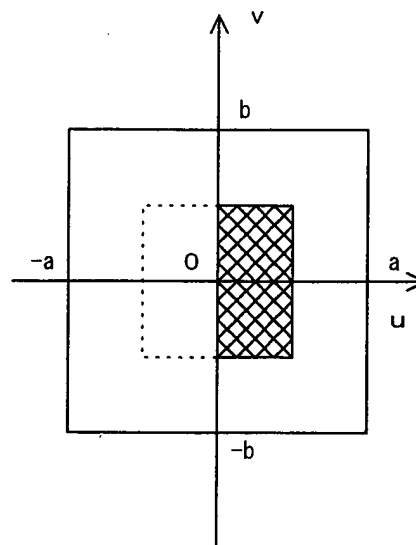


Fig. 11(a)

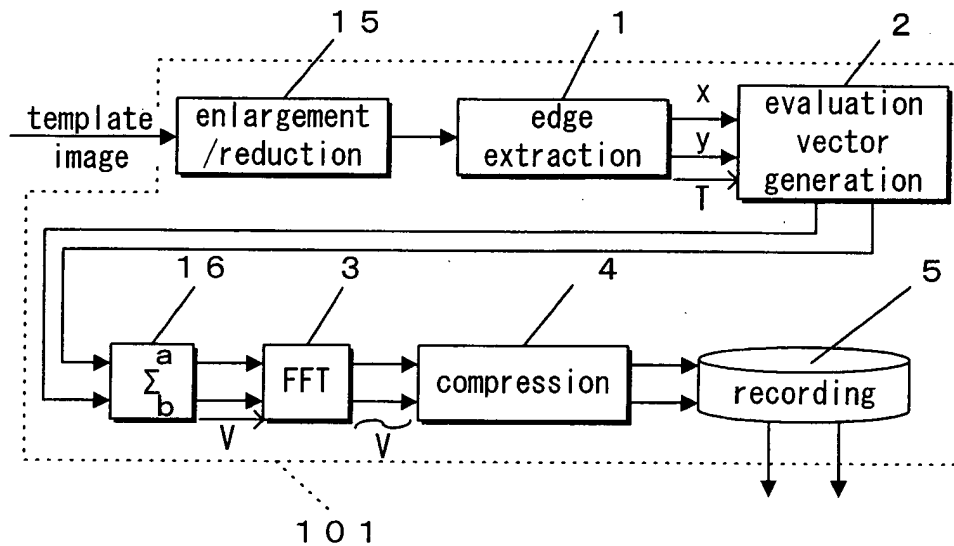


Fig. 11(b)

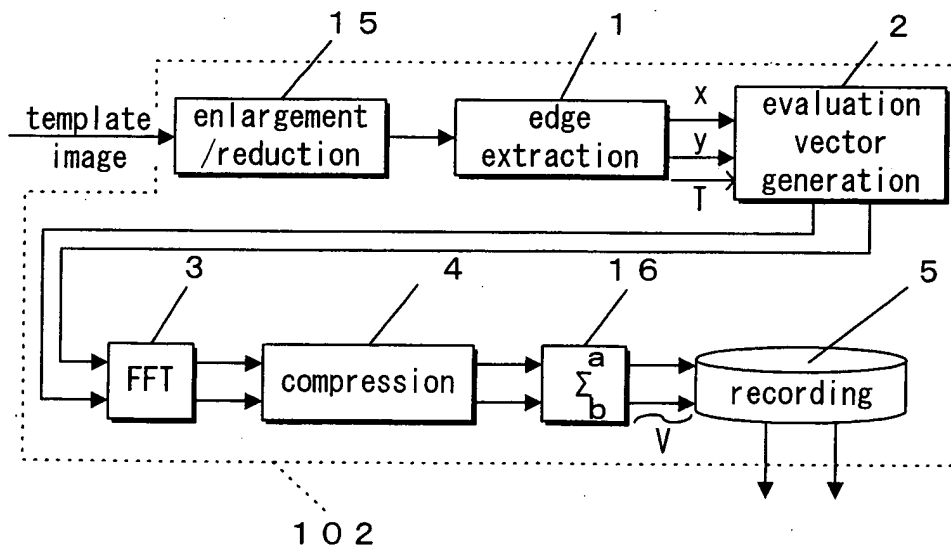


Fig. 12



Fig. 13(a)

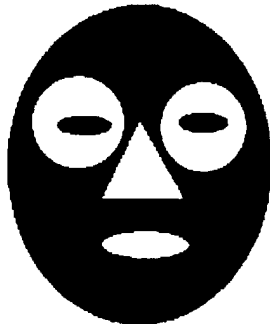


Fig. 13(b)

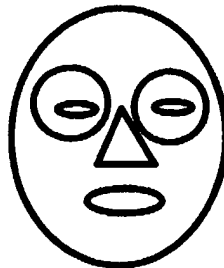


Fig. 13(c)



Fig. 13(d)



Fig. 13(e)

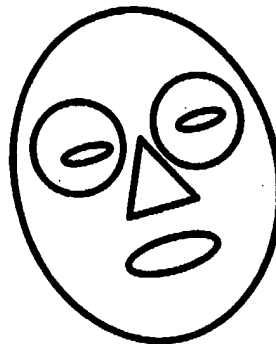


Fig. 13(f)

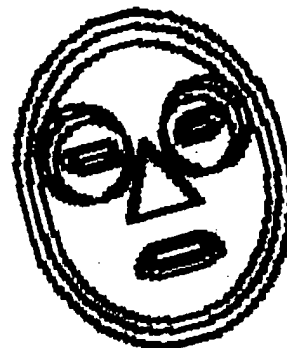


Fig. 14



Fig. 15

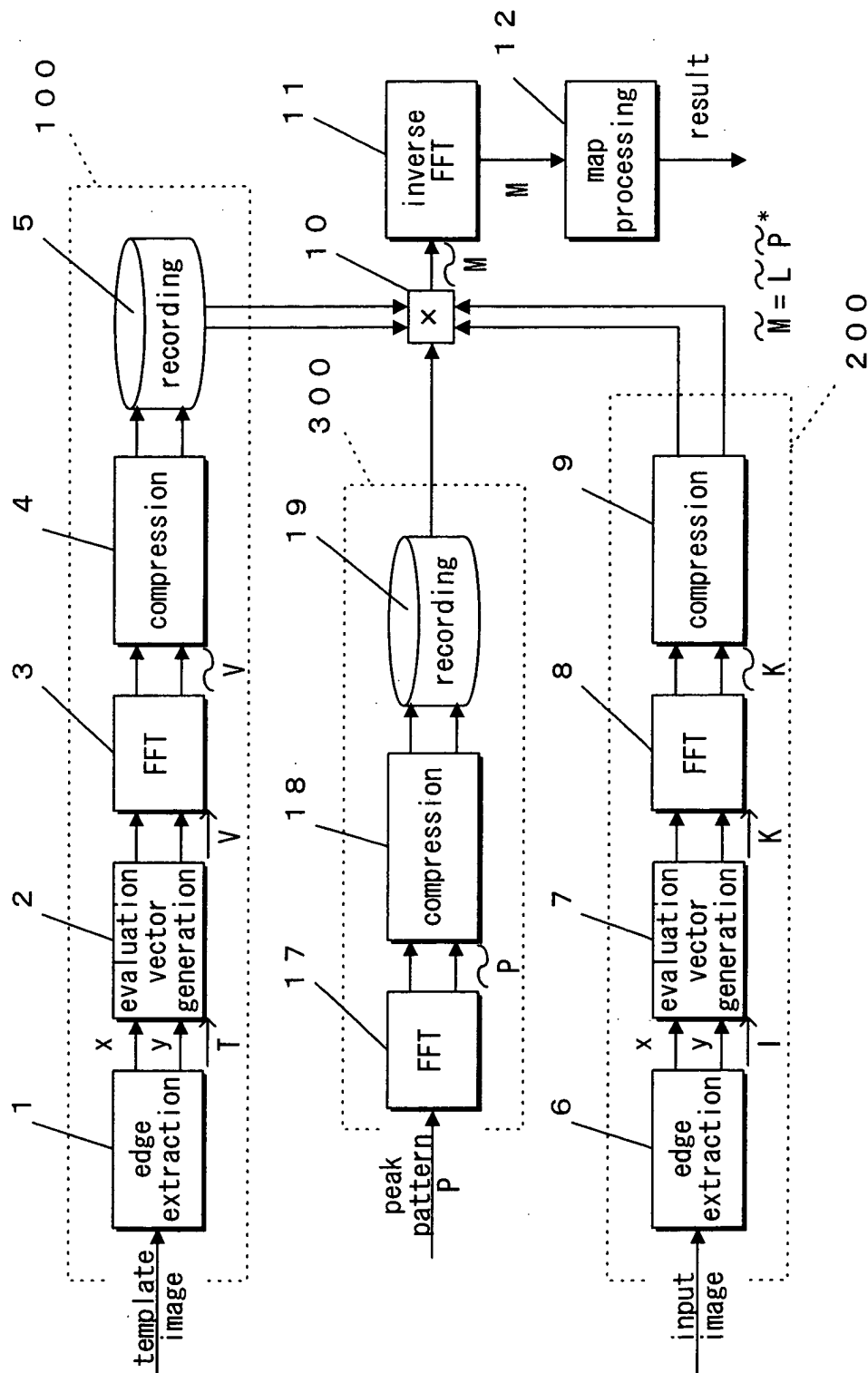


Fig. 16

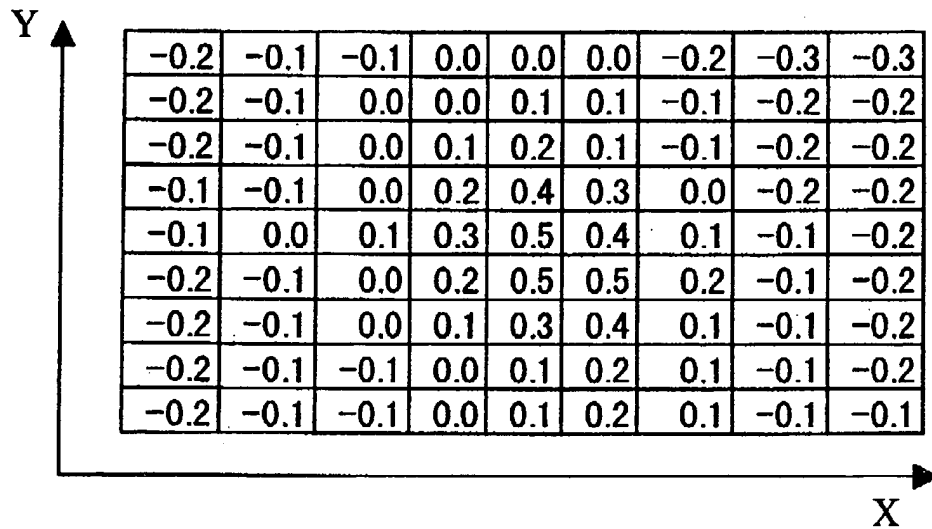


Fig. 17

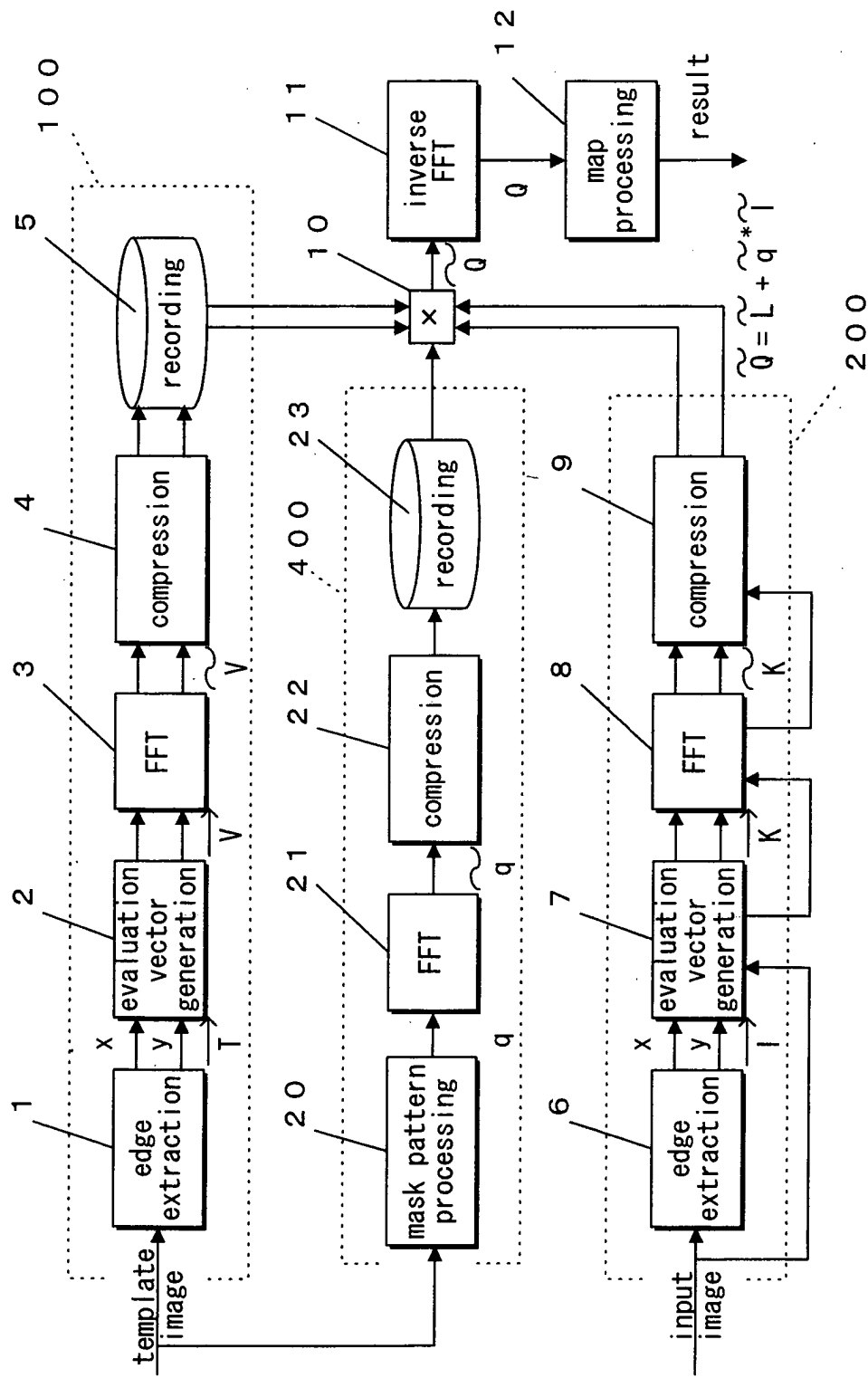
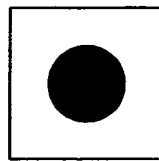
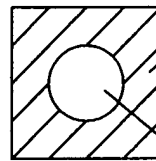


Fig. 18(a)



template
image

Fig. 18(b)



mask
pattern
q

value 0
part

value 1/N
part

Fig. 19

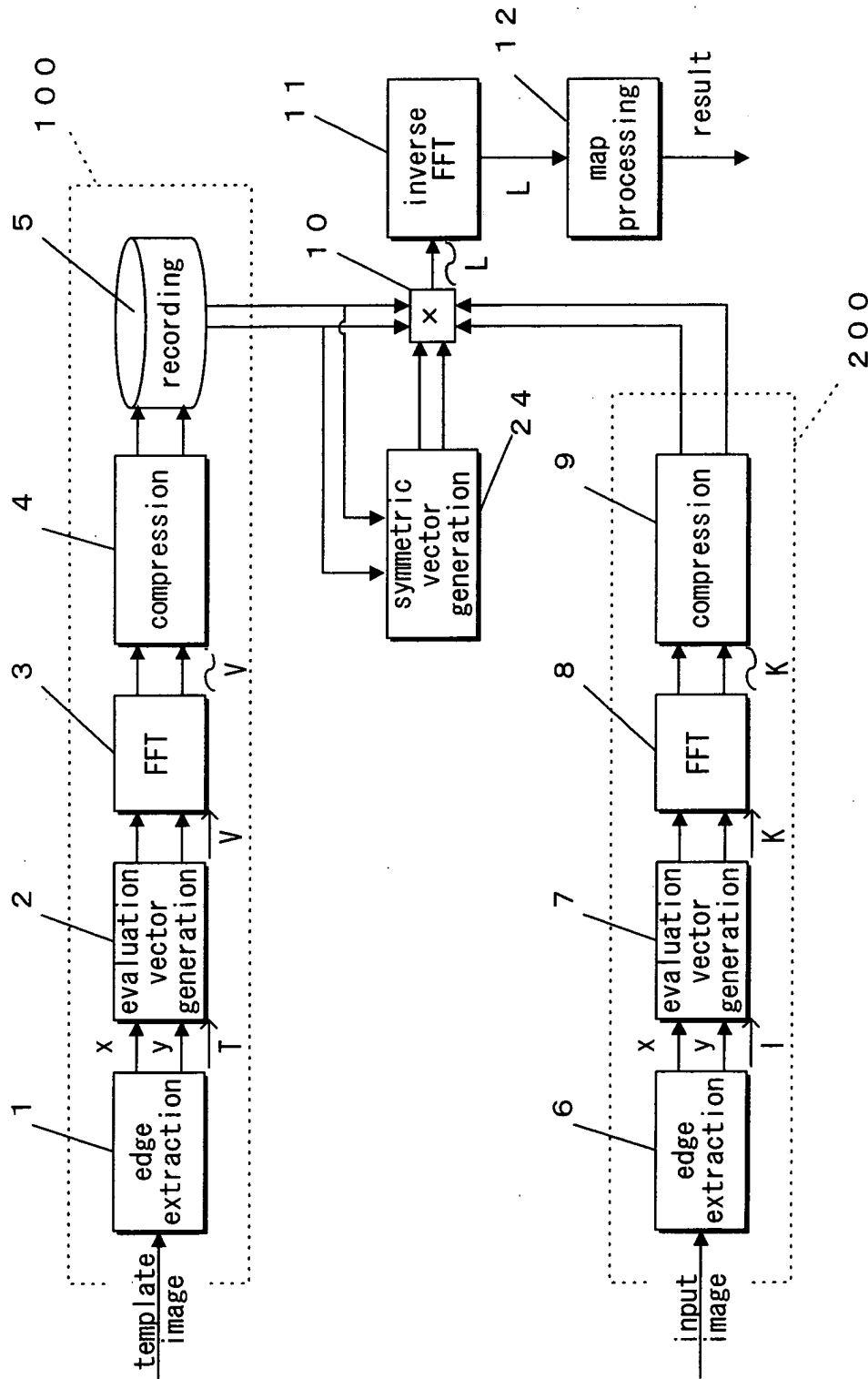


Fig. 20(a)



Fig. 20(b)



Fig. 21

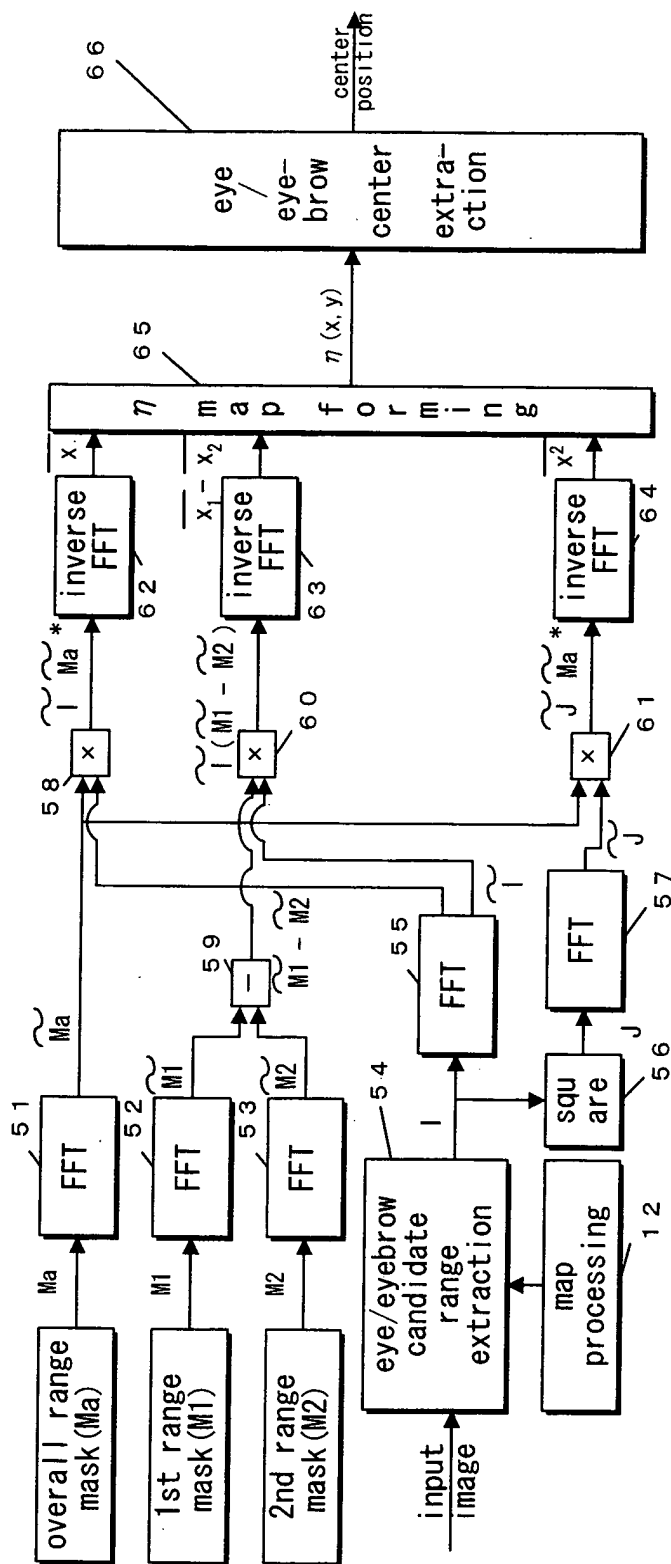


Fig. 22(a)



Fig. 22(b)

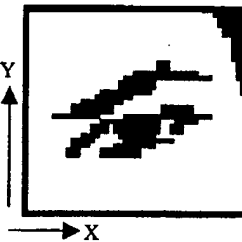


Fig. 22(c)

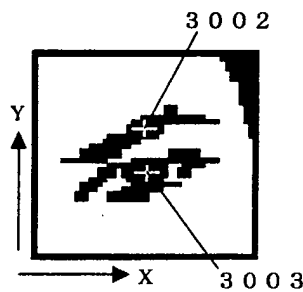


Fig. 23(a)

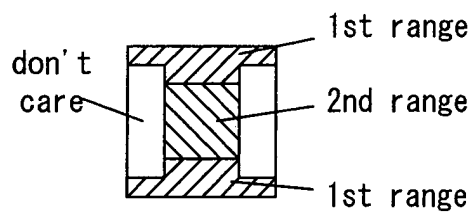
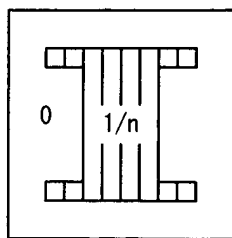
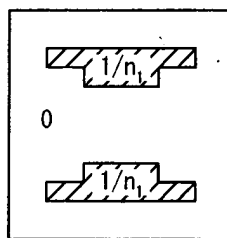


Fig. 23(b)



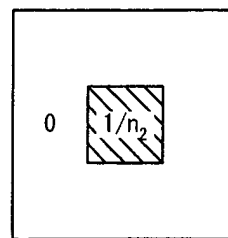
overall
mask (Ma)

Fig. 23(c)



1st range
mask (M1)

Fig. 23(d)



2nd range
mask (M2)

Fig. 24

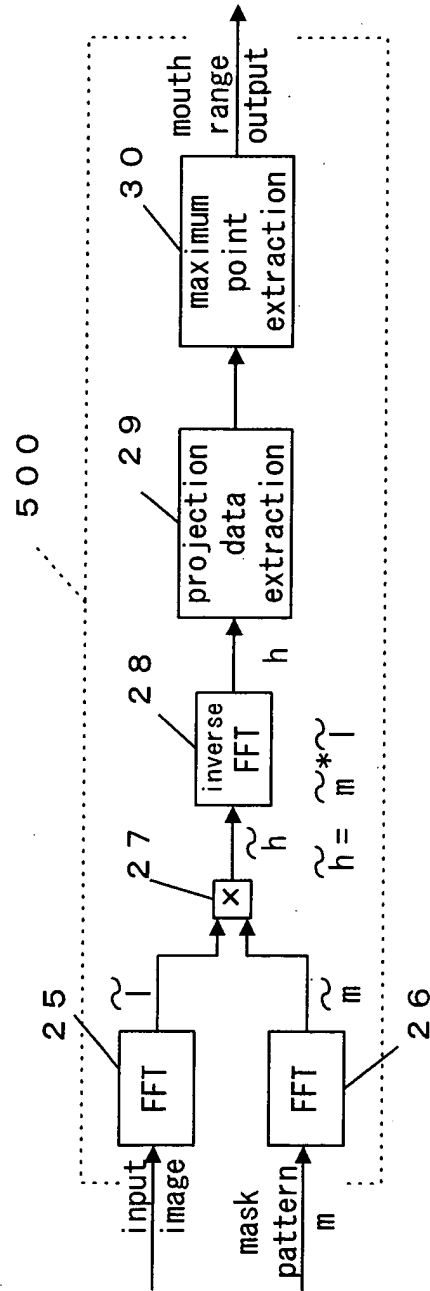


Fig. 25(a)



Fig. 25(b)

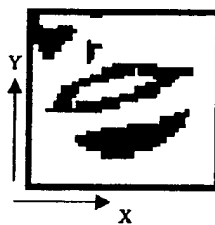


Fig. 25(c)

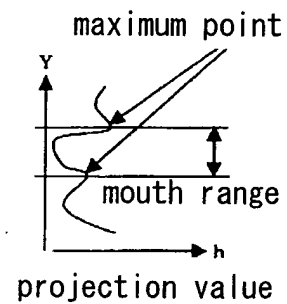


Fig. 25(d)

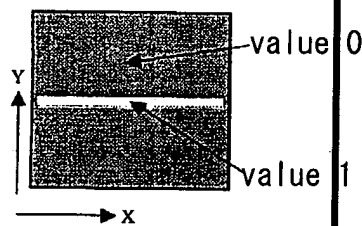


Fig. 25(e)

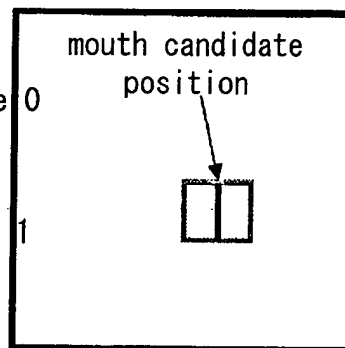


Fig. 25(f)

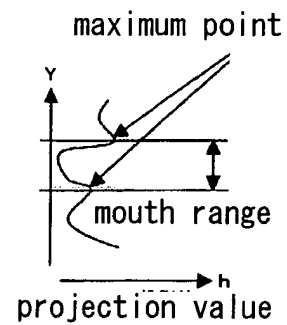


Fig. 26

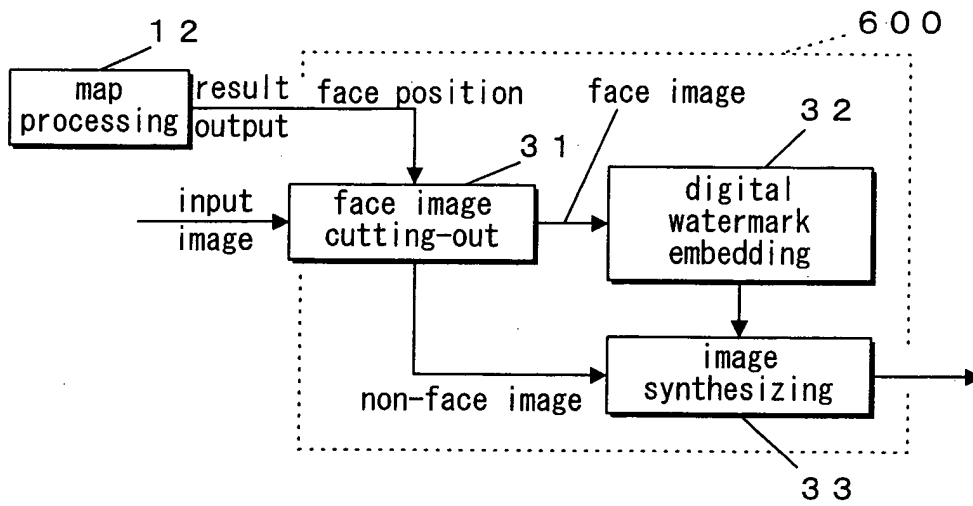


Fig. 27(a)



Fig. 27(b)



digital watermark embedded part

Fig. 28

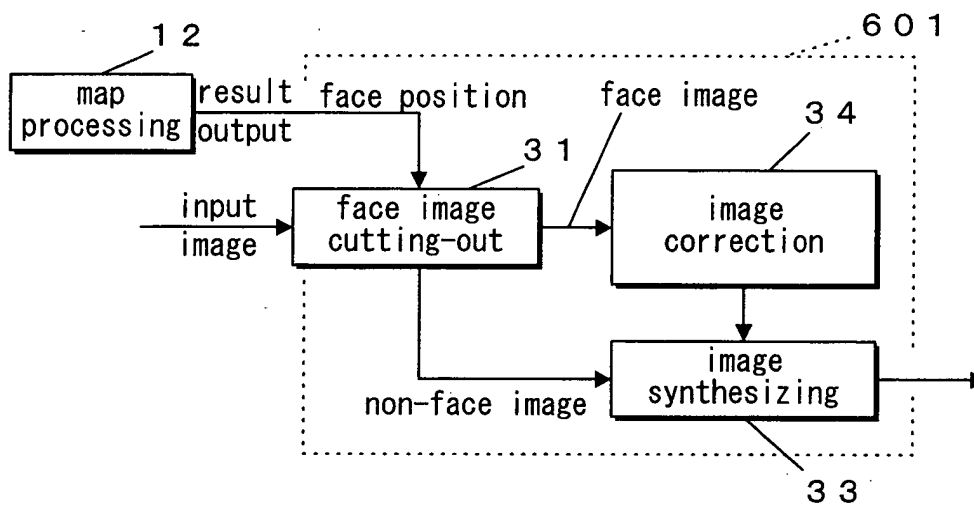


Fig. 29(a)



Fig. 29(b)

detected face range



Fig. 29(c)



Fig. 30

